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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,966	03/26/2004	Christoph Brabec	P04,0088	7918

7590 10/02/2006

SCHIFF HARDIN LLP  
Patent Department  
6600 Sears Tower  
233 South Wacker Drive  
Chicago, IL 60606

EXAMINER
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ZETTL, MARY E

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 10/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/809,966	BRABEC ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Mary Zettl	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-16 and 19-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13, 15, 16, and 19-28 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed July 11, 2006 have been fully considered but they are not persuasive.

The applicant's first argument is that the Antonuk et al. reference makes no mention of the thickness of the glass substrate and there is no indication in the reference that the inventors consider the thickness of the glass substrate to be of any particular importance (page 8). First, the Antonuk et al. reference teaches a **thin-film** detector array serving as both an image detector and radiation measurement device (Abstract, lines 1-2). The examiner directs the applicant to col. 7 lines 20-25 wherein Antonuk et al. states "given the thinness and the uniformity of the amorphous silicon sensors and the **substrates** upon which they are deposited, it is furthermore possible to stack one imager upon another without significant degradation of the imaging information." The applicant has further argued (page 9) that the Antonuk et al. reference is directed to an imaging device, rather than a radiation measurement device. However, Antonuk et al. clearly disclose both a real-time digital imager and a dosimeter (Abstract).

2. In view of the reasons presented above, the 35 U.S.C. 102 (b) rejection of claims 1, 2, 11, 13, and 21-25 and the 35 U.S.C. 102 (b) rejection of claims 3-10, 15, 16, 18, and 19, remains as presented in the previous office action.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Antonuk et al. (US 5,262,649 A1) as previously applied to claims 1 and 25, and further in view of Beyne et al. (US 6,362,484 B1).

Regarding claims 26 and 27, Antonuk et al. teach a carrier being part of a thin-film detector array (Abstract) and further stress the importance of a thin carrier (col. 7, lines 20-24), but do not disclose expressly how thin the carrier is. Beyne et al. teach a radiation imager and detector including a glass substrate with a thickness in the range between 20  $\mu\text{m}$  and 200  $\mu\text{m}$  (col. 7, lines 20-29). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to have made the thickness of the radiation detector taught by Antonuk et al. in the range between 20  $\mu\text{m}$  and 200  $\mu\text{m}$  as taught by Beyne et al. such that both the competing goals of radiation measurement and image formation were achieved.

4. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Antonuk et al. (US 5,262,649 A1) in view of Forrest et al. (US 6,498,091 B1)

Regarding claim 28, Antonuk et al. teach device for measuring ionizing radiation dosage (Abstract) comprising: a foil-like carrier comprised of a material selected from the group consisting of plastic or glass (Figure 1, item 12; col. 7, line 65); and a ionizing radiation absorption structure disposed on the foil-like carrier, the absorption structure comprising a plurality of thin-film layers disposed one above another, said layers comprising a layer embodying scintillator material (Figure 1, item 44) and a layer forming at least one thin-film diode structure (Figure 1, item 30) that supplies an output signal dependent on the ionizing radiation incident on the absorption structure (col. 6, lines 63-68). Antonuk et al. do not disclose expressly an organic semiconductor, because at the time that the invention was made the efficiency of organic semiconductors was significantly less than those of inorganic semiconductors. Forrest et al. disclose an organic photosensitive device (Abstract), wherein the organic semiconductor material is selected from a group consisting of semiconducting conjugate polymers, derivative of semiconducting conjugate polymers, low molecular weight semiconductors, and plastics selected from the group consisting of monomers, oligomers, and polymers (col. 4, lines 27-29). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the invention of Antonuk et al. such that it comprised at least one organic semiconductor as taught by Forrest et al. Even though the invention of Forrest et al. is not concerned with the problem of acquiring a useable signal together with an optimally low absorption of the incoming radiation (as noted in the Applicant's arguments, page 9), Forrest et al. is concerned with creating a thin radiation detecting structure and doing so through the

use of an organic semiconductor device provides the motivation for Antonuk et al. to modify their invention such that not only was a thin semiconductor, but also had the additional processing benefits of organic semiconductors.

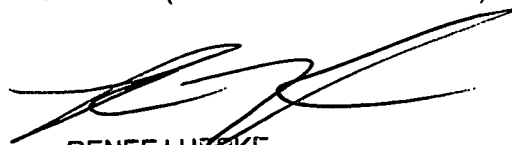
### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Zettl whose telephone number is (571) 272-6007. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached on (571) 272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MZ  
4/13

  
RENEE LUEBKE  
PRIMARY EXAMINER